

### **In the Abstract**

***Kindly add the following Abstract:***

A device to monitor penetration of an instrument in an anatomical structure including at least two electrodes, a source of current supplying the at least two electrodes, and means for measuring impedance between the electrodes, wherein the electrodes are located on the penetration instrument, wherein the first electrode has a contact surface coinciding with a distal surface of the penetration instrument and the second electrode has a contact surface coinciding with a lateral surface of the penetration instrument, and wherein the contact surfaces are dimensioned to have a coinciding and constant contact surface as a function of a degree of penetration of the penetration instrument in the anatomical structure.